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Responsiveness of services rendered at primary healthcare facilities of Bharatpur, Nepal: a cross-sectional study

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ABSTRACT

Introduction Responsiveness of services refers to the way healthcare systems and providers interact with patients and how well they meet patients' non-clinical expectations and needs. The responsiveness is a crucial aspect of a well-functioning health system while primary healthcare is considered as its foundational cornerstone. However, in low and middle-income countries, there are numerous obstacles to its efficient operation and a very limited understanding of the concept of service responsiveness. This study aimed to assess the responsiveness of services and identify associated factors at primary healthcare facilities of Bharatpur, Nepal.

Methods A facility-based cross-sectional study was carried out among 358 patients visiting outpatient department (OPD) of primary healthcare facilities of Bharatpur. A pretested structured interview schedule was used to conduct a face-to-face interview to obtain the information per the study's objective. Univariate as well as bivariable and multivariable logistic regressions were carried out to obtain the result per our objectives.

Results The overall performance of the responsiveness of services was 74.6% (95% CI 70.1 to 78.8), dignity being the highest performing domain (97.2%) and choice being the lowest (22.6%). Respondents aged more than or equal to 50 (adjusted OR (AOR)=4.107, 95% CI 1.28 to 13.14), those who are satisfied with the service (AOR=7.02, 95% CI 3.21 to 15.36), those who perceive high quality of care (AOR=5.69, 95% CI 2.54 to 12.73) and those who did not have to pay for transportation (AOR=4.63, 95% CI 2.20 to 9.72) showed higher responsiveness.

Conclusion The primary healthcare facilities of Bharatpur, Nepal demonstrated nearly three-quarters of the respondents reporting good responsiveness of services at OPD. To further enhance the level of responsiveness, strengthening the referral networks, empowering patients in decision-making and prioritising patient satisfaction and quality of services can help.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Health system responsiveness is an essential goal of health systems, encompassing non-health-enhancing aspects of healthcare delivery.
⇒ There are challenges within the Nepalese healthcare system, particularly in primary healthcare; also there is an absence of comprehensive research on service responsiveness.

WHAT THIS STUDY ADDS

⇒ The primary healthcare facilities of Bharatpur, Nepal demonstrated nearly three-quarters of the respondents reporting good responsiveness of services.
⇒ Our result showed that age group, perceived satisfaction, perceived quality of care and out-of-pocket expenses were associated with the responsiveness of services.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ The findings of this study offer valuable guidance to government to allocate resources more efficiently by addressing specific domains identified for the improvement.
⇒ By identifying specific areas of improvement, policy-makers can use these insights to enhance the overall responsiveness of health services.

INTRODUCTION

The WHO Health Report 2000 has considered health system responsiveness (HSR) as the inherent goal of health system and is considered as an important aspect of effective health system.[1] Responsiveness is defined by WHO as 'how well the health system meets the legitimate expectations of population for non-health enhancing aspects of the health system'.[2][3] As the responsiveness is derived from a variety of disciplines it can be described as the overall experience of an individual when interacting with the health system, including things like the way they are treated and the quality of the environment in which they are treated.[1][2] This includes eight domains: dignity, autonomy, privacy and

confidentiality, prompt attention, adequate quality of basic amenities, communication, access to social networks, family and community support and choice of medical providers.[4]

Moreover, WHO has recognised primary healthcare (PHC) as a crucial aspect of health service delivery, as outlined in the Alma Ata Declaration of 1978 and Astana Declaration of 2018, reigniting the worldwide effort to enhance PHC with the goal of enhancing the responsiveness and readiness of a nation's healthcare system.[2 5] When functioning at the highest level, primary care serves as a gateway to the health system and delivers seamless, coordinated health services to individuals at an affordable price.[6]

Despite the development of a widespread PHC network over the past few decades that covers both rural and urban areas of the country, there are numerous obstacles to its efficient operation.[7] Numerous studies have indicated that healthcare institutions suffer from insufficient funding, inadequate supply of health workforce, inadequately trained and motivated health workforce and inadequate logistical support.[8] Patients frequently encounter inappropriate behaviour from healthcare providers, such as disrespect, abuse, neglect and even denial of care.[8] Furthermore, this circumstance is aggravated by health service quality, a lack of consideration for sociocultural factors that influence client perceptions and expectations, and the health systems' incapacity to cultivate more favourable care environments.[9–14]

According to the Constitution of Nepal 2015, access to basic health service is a fundamental right of every individual, and it is crucial for achieving overall health and well-being.[15] To facilitate the journey towards universal health coverage (UHC) in low and middle-income countries (LMICs), improving PHC through health system strengthening is essential.[16] However, the responsiveness of the health system to the needs of patients can vary greatly, especially in LMICs, which are facing significant challenges in its health system.[4 17]

In Nepal, PHC is provided through a network of health posts (HP), primary healthcare centres (PHCC) and other health facilities.[18] These facilities under the local government are responsible for providing basic health services to the people.[19] Despite the central role of PHC facilities in ensuring the health and well-being of populations, there is limited understanding of the responsiveness of the critical components of health systems. This lack of data represents a significant gap in our understanding of responsiveness of services and hinders the development of effective strategies to improve the quality of healthcare services provided by PHC facilities. Therefore, this study aimed to assess the responsiveness of services and identify associated factors at PHC facilities of Bharatpur, Nepal.

MATERIALS AND METHODS
Study design, setting and study period
This study adopted a facility-based cross-sectional study design and was carried out between mid-June and mid-July 2023. This study was conducted in Bharatpur Metropolitan City (BMC), Chitwan district, Nepal. The cosmopolitan city is divided into 29 wards and covers land area of 433 km^2. There are altogether 40 PHC facilities (1 PHCC, 13 HPs, 14 basic health centres (BHC), 3 urban health clinics, 1 community health unit, 6 ayurvedic aushadhalayas, 1 geriatric clinic and 1 maternal and child health clinic) under BMC for the delivery of preventive, promotive and curative services.[20] The health facilities of Bharatpur serve a large population within and outside of the city providing various health services.

Sample size and sampling
While calculating the sample size, allowable error was kept at 5%, confidence level as 95% and prevalence data as 67%.[21] The sample size for the outpatients to participate in the study was computed using the Cochran formula[22]:

$$n = \frac{z^2 pq}{d^2}$$

$$n = \frac{1.96^2 (0.67 \times 0.33)}{0.05^2}$$

=339.75≈340

The required sample size for calculating the finite population is calculated by considering the infinite population correction factor.

Finite population (N)=6048, which is the total outpatient visits in the previous months in the PHC facilities.

$$n = \frac{n_o}{1 + \frac{n_o}{N}}$$

=321.908≈322

Adding non-response rate of 10%,

n=357.77≈358

The total number of the outpatient visits in the previous month (May) was obtained from the Public Health Promotion Section of BMC. Required total sample size was calculated using Cochran formula for finite population.

Out of 40 PHC facilities this study was conducted among the PHCCs and HPs, out of which (14; 1 PHCC and 13 HPs) six health facilities were selected through simple random sampling. The final sample size was split across the six health facilities (Shivanagar PHCC, Gitanagar HP, Bharatpur HP, Saradhanagar HP, Gunjanagar HP and Mangalpur HP) by using probability proportion to size sampling. Finally, patients visiting outpatient department (OPD) from six selected health facilities were interviewed by convenience sampling (figure 1). Exit interviews with these patients were carried out as they were on their way home after receiving services.

Patients who received healthcare services at the time of the study as an outpatient in the selected PHC facilities were included in the study, whereas patients below
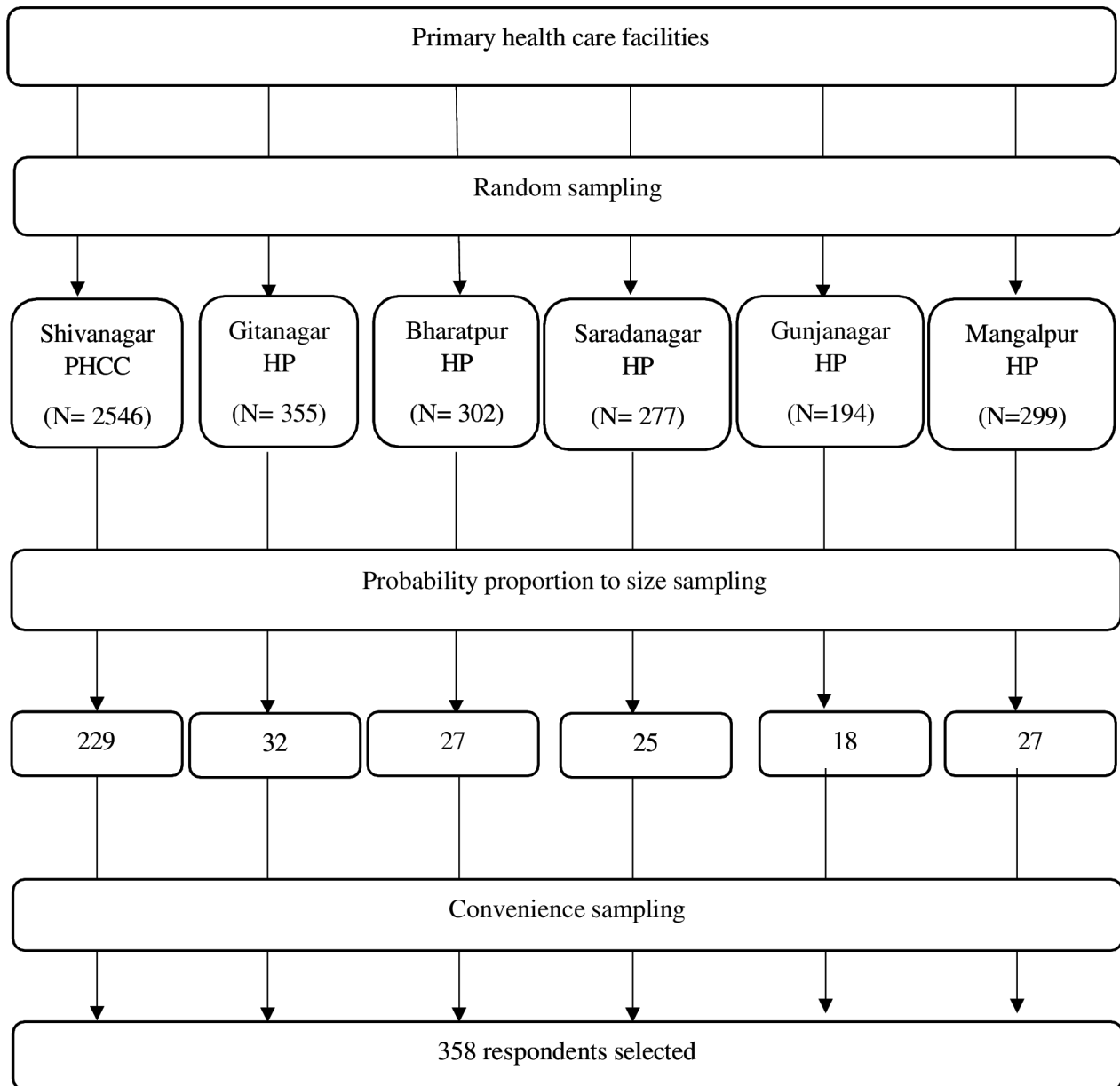
Figure 1 Sampling procedure. HP, health post; PHCC, primary healthcare centre.

18 years and who could not communicate verbally were excluded from the study. Patients who visited health facility other than PHCC and HPs were excluded from the study.

Data collection tools and variables

The interview schedule (online supplemental material) mainly encompassed sociodemographic variables (age, sex, ethnicity, religion, marital status, educational status, occupation and health insurance), individual-related factors (perceived satisfaction, perceived quality of care and patient health quality), health service accessibility-related factors (time to reach health facility, out-of-pocket expenditure for transport and visit to traditional healer) and WHO responsiveness assessment questionnaires. Closed-ended interview questionnaires adapted from WHO multicountry studies were employed to

evaluate responsiveness.[23] The questions for patient satisfaction were adopted from Patient Satisfaction Questionnaire 18 and for perceived quality of life questions from SERVQUAL (Service Quality) model.[24 25] Also, patient health quality was assessed by nine depression questions adopted from Patient Health Questionnaire 9.[26]

Responsiveness of the services was the dependent variable and which was assessed by 15 items customised from WHO multicountry studies.[23] The 15 items were divided among seven domains: autonomy (2), choice (1), communication (3), confidentiality (2), dignity (2), quality of basic amenities (2) and prompt attention (3). The domain 'access to social support network' was not included as it is used to evaluate the inpatient.

The 15 items were measured in a 4-point Likert scale (1 'Never' to 4 'Always'), then the items were computed and

then dichotomised as 'good' and 'poor' by the demarcation formula as[27]:

$$\frac{Total\ highest\ score - Total\ lowest\ score}{2} + Total\ Lowest\ score$$

The overall responsiveness score is the sum of the respondents' ratings (ranging from 1 to 4) across the 15 indicators, encompassing all seven domains

Here, the total highest score signifies the highest cumulative score across all domains by a respondent, while the total lowest score denotes the lowest cumulative score across all domains by a respondent. The final cut-off point obtained through this formula was 27.5. Those above and including the cut-off point to determine 'Good' performance, while below scores, were considered 'Poor'.

Similarly, all the seven domains were added separately and grouped as good and poor by the above formula. Above and including the cut-off point to determine 'Good' performance, below scores, was considered 'Poor' for each domain independently.

Perceived satisfaction was measured using 5-point Likert scale with five response categories (1 'strongly disagree' to 5 'strongly agree'). It was also grouped using the demarcation threshold formula. Above and including the cut-off point (13.5) was considered as 'Satisfied' and below 'dissatisfied'. Similarly, perceived quality was measured using 5-point Likert scale with five response categories (1 'Strongly disagree' to 5 'Strongly agree'). It was also grouped using the demarcation threshold formula. Above the cut-off point (25.5) was considered as 'High' and below 'Low'. Patient health quality was assessed by nine questions ranging from 1 'always' to 4 'not at all'. It was also grouped using the demarcation threshold formula. Above and including the cut-off point[18] was considered as 'Good' and below 'Poor'.

The operational definitions for some of the variables and terms are provided in table 1.

Also, the internal consistencies of Cronbach's alpha values for all domains of responsiveness were 0.91. Similarly, the Cronbach's alpha values for perceived satisfaction, perceived quality of care and patient health quality were 0.89, 0.92 and 0.76, respectively.

The questionnaire form was developed in ODK platform and ODKCollect application was used for the data entry purpose.

The conceptual framework provides a condensed overview of various elements for investigating factors connected to responsiveness encompassing sociodemographic characteristics, individual-related factors and health service accessibility-related factors. The framework itself has been derived and adapted from diverse literature[27–29] (figure 2).

Data processing and analysis

The data collected through ODKCollect were uploaded to the server through the internet and downloaded as an Excel file (.xlsx or .xls). The data were transferred from the final Excel file to IBM SPSS Statistics V.21 for further processing, including cleaning, coding and analysis. A two-part analysis consisting of descriptive and inferential stages was conducted. Descriptive statistics such as frequency, percentage, mean, median, IQR and SD were used to present the findings in the form of tables, figures and text. Correlation coefficient was used to identify multicollinearity, and none of the independent variables had correlation coefficient of 0.7 or higher. Both bivariable and multivariable logistic regression analyses were performed to identify relationships between variables. Variables significant (p value <0.05) in bivariate analysis were selected as potential variables for inclusion in multivariable analysis in order to control the confounding factors.

Patient and public involvement

Patients and/or the public were not involved in the design or conduct or reporting or dissemination plans of this research.

RESULTS

Sociodemographic characteristics

A total of 358 respondents were interviewed. Majority of the participants were 50 or more years of age (51.4%),

Table 1	Operational definitions
Variables and terms	**Definitions**
Responsiveness	The degree to which a health service is able to respond to the needs and expectations of the people it serves. This includes 7 dimensions: dignity, autonomy, privacy and confidentiality, prompt attention, adequate quality of basic amenities, communication and choice of service providers.
Perceived satisfaction	The subjective evaluation of patients about the quality of healthcare services they have received.
Perceived quality	An individual's subjective evaluation of the overall excellence, reliability and superiority of the healthcare services they have received.
Patient health quality	The state of health of the participant they are in.
Primary healthcare facility	The first level of contact for individuals, the family and the community with the national health system. In this study, it refers to PHCC and HPs.

HP, health post; PHCC, primary healthcare centre.

Independent Variable   Dependent Variable
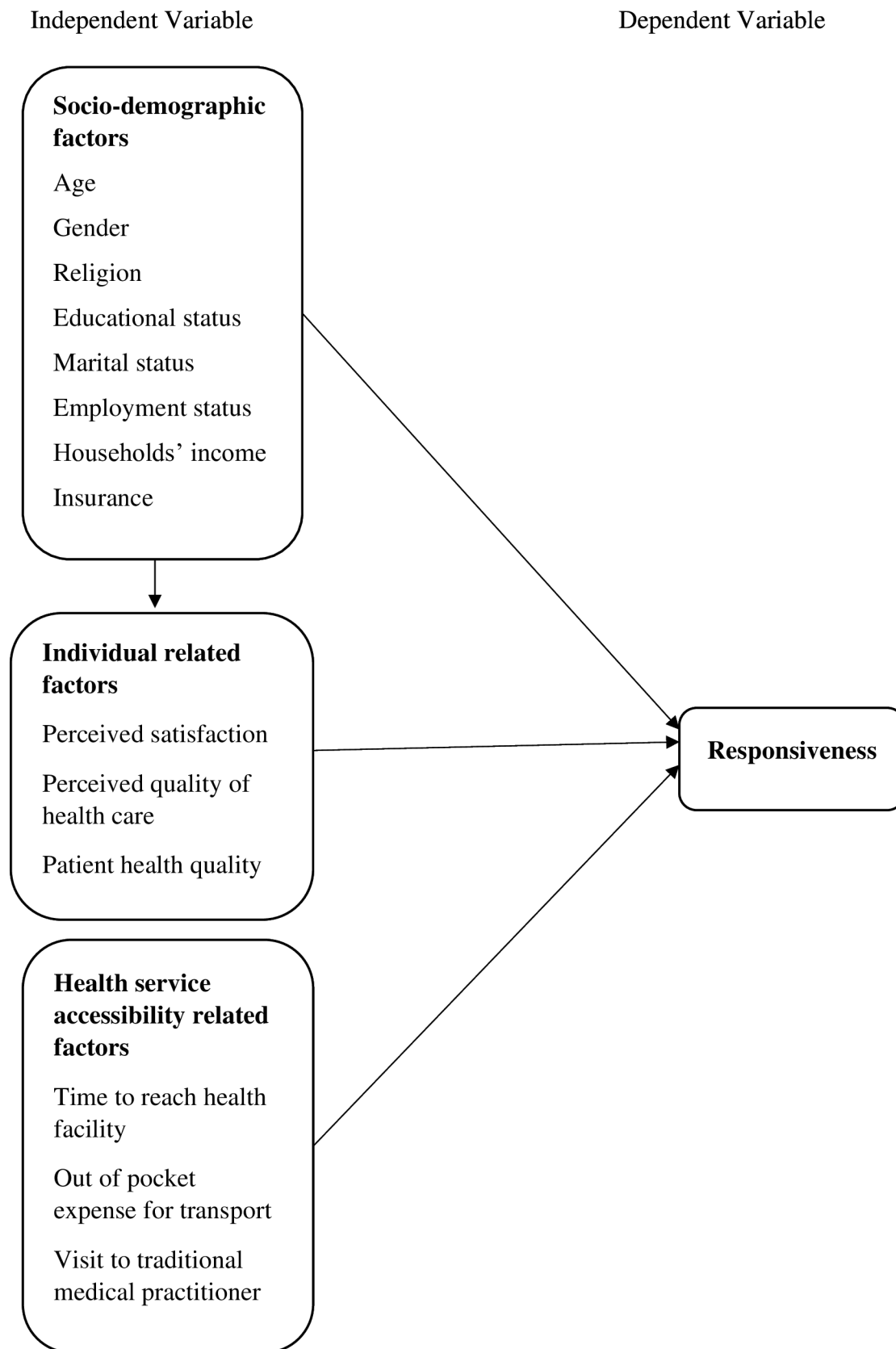
Figure 2 Conceptual framework of the study.

and the number of females and males was almost equal, with 50.6% and 49.4% of the population, respectively. The major ethnic group was Brahmin/Chhetri accounting for 65.1% and the major religion was Hinduism with almost 85.5%. More than four-fifths of the respondents were married (83.0%), with the majority having secondary-level

education (36.3%). Majority of the respondents had agriculture as their occupation (36.0%). Health insurance coverage is significant, accounting for over two-thirds of the respondents (69.6%). The majority of respondents' household incomes were below or equal to NRs40 000 (table 2).

Patient and health service accessibility-related characteristics

More than three-quarters of the respondents (78.8%) reported being satisfied with their healthcare experiences. Most of the respondents (72.1%) perceived a good quality of care. Majority of respondents (94.4%) reported having good health.

The majority of respondents (65.1%) were able to reach a health facility within 10 min. More than half (53.9%) of the respondents did not have out-of-pocket expenses for transport to the health facility. More than four-fifths of the respondents did not seek traditional healing services (82.7%) (table 3).

Responsiveness of services and its domains

The overall responsiveness of the services rendered by health facilities was 74.6% (95% CI 70.1% to 78.8%).

Dignity was the highest performing domain among all with 97.2%. However, autonomy and choice exhibited the lowest performance, with only 67% and 22.6% rating them good, respectively (table 4).

Factors associated with responsiveness of services

Logistic regression was done to find out the factor associated with responsiveness of the services. All the variables which were significant (p<0.05) on bivariate analysis were included in the binary logistic regression analysis. The variables that were significant in bivariate analysis were age, marital status, religion, educational status, occupation, health insurance, perceived satisfaction, perceived quality of care and out-of-pocket expenditure for transport.

The adjusted OR (AOR) for the age group more than or equal to 50 years was 4.107 (95% CI 1.28 to 13.14), suggesting that individuals in this age group had more than four times higher odds of experiencing higher responsiveness of services than 18–29 age group. Likewise, the AOR for satisfied patients was 7.02 (95% CI 3.21 to 15.36), which means the respondents who were satisfied with the services had higher odds of experiencing the outcome compared with those who were dissatisfied. Similarly, respondents who perceived the quality of care as high had 5.69 times higher odds of service responsiveness than their counterparts (AOR=5.69, 95% CI 2.54 to 12.73, p<0.001). The individuals who did not have OOPE (Out Of Pocket Expenditure) for transport had 4.63 (95% CI 2.20 to 9.72) higher odds of experiencing the responsiveness than their counterparts (table 5).

Table 2 Sociodemographic characteristics of respondents

Characteristics	Frequency (n=358)	%
Age of the respondent		
18–29	62	17.3
30–39	51	14.3
40–49	61	17
≥50	184	51.4
Sex		
Female	181	50.6
Male	177	49.4
Ethnicity		
Brahmin/Chettri	233	65.1
Janajati	63	17.6
Dalit	51	14.2
Madhesi	8	2.3
Muslim	3	0.8
Religion		
Hindu	306	85.5
Buddhist	43	12.0
Christian	6	1.7
Islam	3	0.8
Marital status		
Married	297	83.0
Widowed	33	9.2
Never married	28	7.8
Educational status		
Illiterate	33	9.2
Non-formal education	90	25.2
Basic-level school	61	17.0
Secondary-level education	130	36.3
Bachelor level and above	44	12.3
Occupation		
Agriculture	129	36.0
Homemaker	66	18.4
Business	38	10.6
Student	29	8.1
Unemployment	21	5.9
Non-government employee	21	5.9
Retired	17	4.7
Government employee	15	4.2
Daily labour	15	4.2
Foreign employment	7	2.0
Health insurance		

Continued

Table 2 Continued

Characteristics	Frequency (n=358)	%
Yes	249	69.6
No	109	30.4
Monthly family income (NRs)		
≤40 000	191	53.4
>40 000	167	46.6

DISCUSSION

This study aimed to assess the responsiveness of services and to identify the factor associated with it among outpatients visiting PHC facilities of Bharatpur, Nepal. Findings of this research highlighted that almost three-quarters of the respondents (74.2%) reported a responsive health service. The finding of this study aligns with a prior study conducted in Iran, which indicated a responsiveness rate of 72.6%.[30] However, a study in Germany demonstrated a higher responsiveness score (85%), surpassing the finding of the current research.[31] This discrepancy might be due to the type of care accessed; the study in Germany focused on outpatients visiting mental health facilities, which could have influenced the results.

However, some of the studies showed relatively lower responsiveness. For instance, two studies from Ethiopia discovered that the health service was responsive to 66.2%

Table 3 Patient-related and health service accessibility-related characteristics

Characteristics	Frequency (n=358)	%
Patient-related characteristics		
Perceived satisfaction		
Satisfied	282	78.8
Dissatisfied	76	21.2
Perceived quality of care		
High	258	72.1
Low	100	27.9
Patient health quality		
Good	338	94.4
Poor	20	5.6
Health service accessibility-related factors		
Time to reach health facility		
Up to 10 min	233	65.1
≥10 min	125	34.9
Out-of-pocket expenditure for transport		
Yes	165	46.1
No	193	53.9
Visited traditional healer		
Yes	62	17.3
No	296	82.7

Table 4 Responsiveness of services and its domains

Variables	Frequency (n=358)	%
Overall responsiveness		
Good	267	74.6
Poor	91	25.4
Domains of responsiveness		
Autonomy		
Good	240	67
Poor	118	33
Choice		
Good	81	22.6
Poor	277	77.4
Communication		
Good	328	91.6
Poor	30	8.4
Confidentiality		
Good	304	84.9
Poor	54	15.1
Dignity		
Good	348	97.2
Poor	10	2.8
Prompt attention		
Good	318	88.8
Poor	40	11.2
Quality of basic amenities		
Good	277	77.4
Poor	81	22.6

and 68.3% of the service users.[27 28] Similar results were seen in the Asian countries, India (62%) and Bangladesh (67%), where the level of responsiveness was reported to be relatively lower than this study.[21 32] Similarly, this study demonstrated that the responsiveness of the services was higher than African countries like Nigeria (47.0%) and Ghana (47.1%).[33] The variation in the responsiveness could be due to the Nepal's local governments' ongoing efforts such as insuring the presence of competent health workers, implementing training programmes and workshops and upgrading infrastructures to enhance the quality of primary health service and enhance the efficiency of health service delivery.[19]

This study has uncovered variations in the level of service responsiveness across different areas. According to this study, the majority of respondents reported positive experiences in domains such as communication, confidentiality, dignity, prompt attention and quality, with ratings ranging from 84.9% to 97.2%. In this study, the highest were seen among the dignity (97.2%) and communication (91.6%) which aligns with a study

Table 5 Factors associated with responsiveness of services

Variables	Responsiveness of services		Unadjusted OR (95% CI)	Adjusted OR (95% CI)
	Poor	Good		
Age group				
18–29 (ref)	33	29	1.00	1.00
30–39	16	35	2.49 (1.15 to 5.39)	2.208 (0.65 to 7.46)
40–49	13	48	4.20 (1.90 to 9.26)	2.382 (0.71 to 7.98)
≥50	29	155	6.08 (3.21 to 11.50)	4.107 (1.28 to 13.14)*
Marital status				
Never married (ref)	16	12	1.00	1.00
Married	70	227	4.32 (1.95 to 9.57)	0.44 (0.119 to 1.67)
Widowed	5	28	7.46 (2.22 to 25.05)	0.730 (0.10 to 5.18)
Religion				
Hinduism (ref)	71	235	1.00	1.00
Buddhism	15	28	4.137 (1.08 to 15.82)	0.72 (0.290 to 1.80)
Islam/Christianity	5	4	2.33 (0.54 to 10.01)	0.419 (0.07 to 2.24)
Education				
Illiterate (ref)	6	27	1.00	1.00
Non-formal education	16	74	2.13 (0.83 to 5.46)	0.86 (0.19 to 3.77)
Basic-level education	13	48	2.19 (1.17 to 4.10)	2.55 (0.49 to 13.22)
Secondary-level education and above	56	118	1.75 (0.88 to 5.45)	3.75 (0.67 to 20.87)
Occupation				
Employed/business	23	51	1.00	1.00
Homemaker	13	53	1.84 (0.84 to 4.01)	1.26 (0.407 to 3.91)
Agriculture	22	107	2.193 (1.19 to 4.29)	1.12 (0.389 to 3.21)
Others	33	56	0.76 (0.39 to 1.47)	1.42 (0.49 to 4.12)
Health insurance				
No (ref)	43	66	1.00	1.00
Yes	48	201	2.72 (1.66 to 4.48)	1.70 (0.83 to 3.48)
Perceived satisfaction				
Dissatisfied (ref)	53	23	1.00	1.00
Satisfied	38	244	14.79 (8.14 to 26.87)	7.02 (3.21 to 15.36)***
Perceived quality of care				
Low (ref)	61	39	1.00	1.00
High	30	228	11.88 (6.83 to 20.67)	5.69 (2.54 to 12.73)***
Out-of-pocket expenditure for transport				
No	21	144	3.90 (2.26 to 6.72)	4.63 (2.20 to 9.72)***
Yes (ref)	70	123	1.00	1.00

Significant at *p<0.05, ***p<0.001.

conducted in Iran.[34] Confidentiality was one of the high-performing domains in this study with 84.9%. One possible reason for these results could be the implementation of minimum service standards (MSS), which emphasise the importance of maintaining patient privacy.[35] This finding aligns with a study conducted in Tanzania, where confidentiality (86.7%) and dignity (81.4%) were

the domains that received the highest scores in terms of responsiveness.[36] Similarly, studies conducted in Iran and Ethiopia also reported favourable results for confidentiality and dignity as high-performing domains.[27 37] In contrast to previous studies conducted in Ethiopia, South Africa, Nigeria and Tanzania, this study revealed prompt attention (88.8%) and quality (77.4%) as domains with

good performance.[17 27 38 39] This discrepancy in findings can be attributed to several factors. First, the relatively low number of patients in the HPs included in this study may have contributed to reduced waiting times, allowing for prompt attention to be provided. Additionally, the implementation of MSS in the health facilities may have played a role in the improved performance of the quality domain. These standards likely outline specific guidelines and protocols for delivering high-quality care, leading to better service provision and patient experiences in terms of quality.[35]

This study revealed that choice was the least performing domain, with only 22.6% of respondents reporting a good experience. This finding is consistent with a study conducted in Brazil, which reported the lowest performance (24.4%) in the choice domain.[40] Studies conducted in Iran and Ethiopia also yielded similar results, with the good performance of choice being reported as 35.8% and 37%, respectively.[27 37] This can be attributed to a lack of awareness among patients regarding the specific specialisations of healthcare workers. Additionally, the limited presence of healthcare workers with distinct specialisations further restricts the options and choices available to patients. Similarly, autonomy was also one of the low-performing domains after choice with only 67%. This result was higher than the result of the similar study conducted in Ethiopia where the autonomy was 54.9%.[27]

The findings of this study revealed that, except age, no sociodemographic variables showed significant association with responsiveness. Specifically, the older age group (≥50 years) was 4.1 times more likely to experience a higher responsiveness of services compared with 18–29 years age group. This finding aligns with a previous study conducted in Ethiopia where the likelihood of responsiveness among respondents aged 50 years and above was 2.48 times higher compared with the younger individuals.[41] This finding is consistent with a previous study conducted in Germany[42] and Thailand[43] which identified a significant association between age and the responsiveness. This may be due to accumulated life experiences and expectations among older individuals; specifically older individuals may have had more encounters with healthcare systems and developed certain expectations regarding responsiveness. However, contrasting results were observed in a study conducted in Tanzania, where older age, sex and marital status were negatively associated with responsiveness, while high income and educational status were positively associated.[39] Likewise, a study in Nigeria revealed that gender, educational status and income were significantly associated with responsiveness.[3] These findings highlight the complexity and variability of the relationship between sociodemographic factors and responsiveness across different settings and populations. It suggests that cultural, economic and social factors contribute to the divergent results observed in different studies. Further research is needed to understand how sociodemographic variables influence the responsiveness in various contexts.

Several studies have emphasised the positive association between perceived satisfaction and responsiveness of services.[28 43 44] This study also supports this concept by demonstrating a positive association between responsiveness and perceived satisfaction. Notably, a study conducted in Ghana revealed that perceived satisfaction was a significant predictor of responsiveness.[44] Similarly, studies from Thailand and Ethiopia found that perceived satisfaction was positively linked to responsiveness.[28 43] A cross-sectional study involving PHC facility patients in Ethiopia discovered that those who reported higher satisfaction with their care were nearly ten times more likely to experience responsiveness compared with dissatisfied individuals.[27] Moreover, WHO proposed that satisfaction exhibited a positive and significant association with all domains of HSR.[45] Thus, the available evidence strongly suggests a positive link between perceived satisfaction and responsiveness, indicating that patient satisfaction can serve as a valuable indicator of service responsiveness. When patients are satisfied with their care, it suggests that the healthcare system is meeting their needs and responding effectively.

According to the findings of this study, individuals who perceive a high quality of care are significantly more likely to experience responsiveness in their healthcare. This is supported by a similar study conducted in Ethiopia, which found that an increase of one unit in perceived quality of care led to 0.5% increase in the responsiveness score.[28] One possible reason for this might be when individuals perceive that their healthcare providers are committed to delivering high-quality care, it may enhance their trust and satisfaction, leading to a greater perception of responsiveness. However, a separate study conducted in Ethiopia discovered no association between perceived quality of care and responsiveness.[27]

In the realm of healthcare assessment, responsiveness, perceived quality of care and satisfaction play pivotal roles in understanding and evaluating the patient experience. The interconnectedness between these concepts is intricate and symbiotic.[46 47] Responsive healthcare systems, adept at addressing patients' non-clinical needs, often contribute positively to the perceived quality of care. Elements such as effective communication, respectful treatment and consideration of patient preferences enhance the overall quality perception. Moreover, the perceived quality of care significantly influences satisfaction, as patients are more likely to be satisfied when they believe they have received high quality of care.[46 47] Recognising the interdependencies between responsiveness, perceived quality and satisfaction is imperative for healthcare providers and policymakers seeking to optimise the holistic experience for patients.[47]

The responsiveness of services is influenced by various factors, including financial aspects of healthcare.[48] This study revealed that respondents who did not have to make out-of-pocket payments for transport to reach the health facility had 4.63 times higher odds of perceiving higher responsiveness of services. This result aligns with

a similar study conducted in Ethiopia where people who had out-of-pocket expenditure for transport experienced a poor responsiveness of services.[27] Accordingly, another study demonstrated that improved financial fairness in healthcare led to higher service responsiveness score.[28]

Our study highlights the need for targeted interventions to improve responsiveness of services. There is a need for the government to allocate resources more efficiently by addressing specific domains identified for the improvement. Additionally, the study sheds light on various factors associated with responsiveness, emphasising the importance of strategic investments in these areas to effectively improve service responsiveness.

Limitation

This study collected the data only from the patient perspective. It would be beneficial if it would have been performed with mixed approach involving the providers' perspective as well. The study used convenience sampling for the selection of study participants. The study solely focused on the outpatients of the PHC facilities, it would have been better if it encompassed other services such as inpatients, maternal and mental healthcare, as well as including other health facilities like UHC, BHC, hospitals and private clinics to achieve a more comprehensive understanding of responsiveness.

CONCLUSION

The PHC facilities of Bharatpur, Nepal demonstrated nearly three-quarters of the respondents reporting good responsiveness of services at OPD. Dignity received the highest scores, indicating a culture of respect for patients. However, choice had the lowest scores, suggesting a need for improvement in providing patients with options. Respondents above or including 50 years, satisfied clients, those perceiving high-quality care and those not paying for transport experienced better responsiveness than their counterparts. These findings can help local authorities improve health services, and the study provides a foundation for further research and interventions. Recommendations include strengthening the referral mechanism, empowering patients in decision-making and focusing on patient-centred care and quality improvement.

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